SEQUENCE LISTING

<110> Macina, Roberto
Recipon, Herve
Pluta, Jason
Ghosh, Malavika
Sun, Yongming
Liu, Chenghua

<120> Compositions and Methods Relating to Colon Specific Genes and Proteins

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<150> 60/252,505
<151> 2000-11-22

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<211> 680
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<213> Homo sapien

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<212> DNA
<213> Homo sapien

<220>
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<222> (252)..(338)
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<213> Homo sapien

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<211> 2418
<212> DNA
<213> Homo sapien

<400> 19
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<211> 531
<212> DNA
<213> Homo sapien

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<212> DNA
<213> Homo sapien

<400> 21
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<211> 293
<212> DNA
<213> Homo sapien

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taatacatgt attaaataaa tttgtatgca ttttcctgtt gatctgtctt atatcaattt 240

aattctcagg cttagcagag gatgaagaga actaggaaga tggtcatcaa aat 293

<210> 23
<211> 625
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<213> Homo sapien

<400> 23
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<211> 739
<212> DNA
<213> Homo sapien

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<211> 438
<212> DNA
<213> Homo sapien

<400> 25
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<212> DNA
<213> Homo sapien

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<211> 387
<212> DNA
<213> Homo sapien

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<210> 29
<211> 159
<212> DNA
<213> Homo sapien

<400> 29
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<212> DNA
<213> Homo sapien

<400> 30
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gaatgcattc cttttgccac atagaccata tggctagttc tccaactttt ttgcttattt 300

ttaataaacc ttgctgttca acaatcagag aaacctttag attttggatg attcttccag 360

ttgaggtaga aacatcttag ataataggaa aggcaaatac aaagtcctaa cattttcata 420

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ataaatagtg atttcattaa tcattgaatc agatgaagca gttataaatc actttttact 540

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taggagttaa aataagttat gtttgatctt tttcccttga aaataatgct gaacttattg 720

tctacattct gattattagg cagaaatgca cttgtttaaa tcatagaagt aattcatttg 780

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gttcttgaaa cattttattt tcttgagttc atcacttttg actcttgtat gagatgtgat 1440

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<210> 31
<211> 531
<212> DNA
<213> Homo sapien

<400> 31
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cacttttata ccacatctgc ttttacagtt acaaacattg aaaatatcct accctcaatc 180

gagcttcaca tgctgttgct atcagtttgc taagacttaa agaataaaat aataggctaa 240

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tcttcaattg ctctttctcc aacagatcct tcatcccact ctctaatagt t 531

<210> 32
<211> 1001
<212> DNA
<213> Homo sapien

<400> 32
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taaaataatg ttctaataaa ctccctgaat tcattcacat gtattgtatt cacttttata 180

ccacatctgc ttttacagtt acaaacattg aaaatatcct accctcaatc gagcttcaca 240

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ttaaactggt ttatccgtta tggaatatct ctgcataatt aacccatttc ttcctccctt 480

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actgctctcc cagcactgtg gcagacactg gacctactat acgaaaacta tcactaaccc 660

cttcttcctt accttcctcc acaataaaga ctagcaagcc aataactcaa ctgtacattc 720

tcccttggag tcagaaatag ccatcctaca tggttgtgac cactgtaaca ttgctagaaa 780

cccctgcgga gagattctgt cattaaacaa acaggagagc ttgccaggag aaataacttg 840

tctccaccac ttccacattt tctgcctgga atgtggttaa gcctggtgga gcagcactgt 900

cttgcaacag taagttgtta ccttaagaga aaggtgtaat gctacaaaag gtatgaaagc 960

attagagact ttgatataca gaaaagatat tagaaaaagc a 1001

<210> 33
<211> 420
<212> DNA
<213> Homo sapien

<400> 33
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aatttttgtt atttaacatc tttaatagca cagcaaacat cttttcagaa attttcagtt 180

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tggtgtggga atcagggaaa ggctgcctct ttggtatctc aactggtatt gattattgct 360

atcaactatt tggggagaaa aaatcaaaat gaagccctgt caaattttag aagtacctgc 420

<210> 34
<211> 1613
<212> DNA
<213> Homo sapien

<400> 34
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acccgtttgg ggattcgaac atacatggtt aaagttaatg tgggaaactc acgttaagat 180

catgggagac attgggtttc agaacatgta atatcccggt tgcacccagt ttaacagccg 240

tcttaattgg cctgaaagcc aaaaatagac tttctgaaat accagattag ttaaaaatac 300

tttccattga tagcagtgct agtccctaga acaaaaggta agcaaaactt atttgtaagt 360

tactgcctat tcaatgccca gaatatgtag atcctaaatc taagccctta atatacatct 420

actttaaaga taactgaaag atctcacatg cctgataatc cttaatttaa accgtcctgt 480

aaacatagtc aaaatctgct aatagaaata caattcaagt aaacattgca tatttgattt 540

aaaccacctt acagttaaat tcactcatga cacattggat cataaccact aatatgtaaa 600

aagttttaaa aaaaatcatc cttacgtata gatgaaaata aactttgtaa acttgttcat 660

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cacaggcgtg tgccaccatg cctggacagt tttggggttt ttttgtattt ttagtggaga 1560

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<210> 35
<211> 597
<212> DNA
<213> Homo sapien

<400> 35
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tatgctctgc ctttatttttt tctttcttac ccacttagct tcctaattgg aggaaggagg 180

cgtggtaaag gtatatgaag actatggctt aattagacca gaaaacactg tcataatctc 240

tggggtcatc agaatgtcca gttttgtctt tgggccaaga taagggcagt gggatttatg 300

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ggtttccaac tggcctaata cattaagtaa gactggctga taacatgacc agacagacat 420

aaagaccctg ttgggaatga cattgaactc tcaaagtcaa gatttcttac acaaatctat 480

cagctggaga aaatgaaggc agtgtggtat atgtgtgcca ataaggacat tatgaagctt 540

aaatatggaa tgtctcttgg acccccgatg tcatctgtat tctctttttc ttcttgt 597

<210> 36
<211> 1327
<212> DNA
<213> Homo sapien

<400> 36
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caacccagtt cttaatacag gatactaact taaaatatag actcaagtta tacgataatt 120

caaacattta ttgtatttat actattctat atgtactttt ccaggaacca ggaatacaaa 180

actgacatgt tctctgtaca gaggctcaga ctagtagaga acagttaggt acgccgttaa 240

ttataaacta atatgtatca tcaattatgg gtttttatgg gggtttggca ggtggaaggg 300

accagggaga gatgatgagt gatgatggtt atgtagtctt taggaggatg caattataac 360

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tacctctccc atctttaaga aattgtctgg atgtccatga aagatgctga cacttgtatt 540

aattcattaa aaaacaccac cccctccctg aaataaacta aaaagtaatg aattcataga 600

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gaaatgtgta cctattcacc attccaacgt gaagaagctc tgcagtagga aaaataatta 720

acacacttat agtctactgc ccatgtaagg atcagctccg gctaagaggc caaagatggg 780

tgacatcgtt atgctctgcc tttatttttt ctttcttacc cacttagctt cctaattgga 840

ggaaggaggc gtggtaaagg tatatgaaga ctatggttta attagaccag aaaacactgt 900

cataatctct ggggtcatca gaatgtccag ttttgtcttt gggccaagat aagggcagtg 960

ggatttatga tgtgttgttt atagtctgaa actactctgg tgatcaccag ggtcagtttc 1020

tttaatgatg gtttccaact ggcctaatac attaagtaag actggctgat aacatgacca 1080

gacagacata aagaccctgt tgggaatgac attgaactct caaagtcaag atttcttaca 1140

caaatctatc agctggagaa aatgaaggca gtgtggtata tgtgtgcaaa taaggacatt 1200

atgaagctta aatatggaat gtctcttgga cccccgatgt catctgtatt ctctttttct 1260

tcttgtacta tatcctttgc ctgtaaataa aaggtttatt tgaaaaaaaa aaaaaaaaaa 1320

gatcggc 1327

<210> 37
<211> 172
<212> DNA
<213> Homo sapien

<400> 37
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tattagctgt atggctctgg tttctgttcc ctgttccaaa tgttaaagtc tactgttgta 120

ttctaaaagc agccatggac tgaatgtagc tgtgttccaa taaaacttac ac 172

<210> 38
<211> 1547
<212> DNA
<213> Homo sapien

<400> 38
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taatgggtgc tcatacagca gtctagactt aaggtgattc aactactata tattaaacta 120

gattatcttt tatttttaa ttttgaaatc tggatgctca agctctgcct gcacaaccac 180

atgaggaaga aggaacaatg acaacaaaaa taacactaaa tttaaattta agagtactac 240

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atattttggg gaagaaaaag actaaaagtt ctaaggaaga aaatgcgaac cttgatagtt 360

tgaaatagtt aaaaagacag tgtagaaact gtttaggcag tttgattatg gactattaga 420

tgatacttgg gtctgataat ggtataagga gaataaagta tttagggatc caatattacg 480

cctgcagctt tttccaaata gttcatgggg gaggggggatg atggaatata gtgaaagata 540

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attttgggga agaaaaagac taaaagttct aaggaagaaa atgcggacct tgatagtttg 840

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taactagata ggtttgttgt aagcttagga tgtttacagt tcttcatgtt aagttgagcg 1080

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gcaggcagtg ggccataatt tgcaacacct gattcacagc ataattttgt cacaaactga 1500

aagtgttcct caattaaagt gatttttttt tcttgaaaaa aaaaaaa 1547

<210> 39
<211> 360
<212> DNA
<213> Homo sapien

<400> 39
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tccatttcaa agcattctgt tggccttctt acactgtttt tctctgccta tcctgggacc 120

tgagttctcc tggacatgaa tctgcagcca cagagcctag aagctcattc ctccacattc 180

tgtgactgtt ccccaaacac agggagaatt tgcagaaaat aagcccaaaa atcttgccat 240

tctttgcaat aaaaccccac attacaaact gctgaaaaca ggattttagc ctgaataggt 300

tgttcctcta tttgaaagcc tttacaattt cggagggaag tttccaaatc atcagtaagt 360

<210> 40
<211> 754
<212> DNA
<213> Homo sapien

<400> 40
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taatgatagc gttcgtacac attcacctcg gcctgtctta agattcaaaa actttccaag 120

actctaggga aatctttcca gacgctagac ccgagttaaa gattagatgt tgattgaatg 180

aaacactcct gcttgtaggt gcaatcccac atggagctta agatatatat aagcactaga 240

aaaaaaaact tgtaactttg agttgatctg gtgatttacc tggcgcttct ccctgtaagt 300

ggctgcagaa ataaacttcc ttctttccca gtctgtctgt atcttagtat tgaacaattg 360

cgatggagct gcccagcaaa gtcctcttct atgtggttat ctgggactcc ttttggaggg 420

aacattttaa attttccatt tcaaagcatt ctgttggcct tcttacactg tttttctctg 480

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aaaaatcttg ccattctttg caataaaacc ccacattaca aactgctgaa aacaggattt 660

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<210> 41
<211> 635
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (560)..(579)
<223> a, c, g or t

<400> 41
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aagaaaacac cttgtgtgct attagtggcc cttgcaagaa ggaagatgct gttttccata 180

acaggaaatc aacgaacgaa caaagataat ccgtctctcc atcttacaaa aacaaagaaa 240

gcctagcaga aaagtgaaac aggacagggt cctgaaaaac atctagtgat gccaataaca 300

tggaatgttt tttaaaaagt gatttgtctc actgaagctg cagaagggta tcccacactt 360

atatattatg tgactgcact aaaaacagac gcttttggtg cactgagcgt tacaaaaagg 420

cagaaagctc acaaatagat gcaattttag gtatgggaat aaaatgacat aaagaaactg 480

accttgttat cagtttattc tgtagagtgc aagataagga tattccaagg aaaaacctat 540

tacaggtagt atatagagtn nnnnnnnnnn nnnnnnnnna agccgaatcc agcacactgg 600

gggcgtacta gtggatcgag tcgggacaag ttggg 635

<210> 42
<211> 1142
<212> DNA
<213> Homo sapien

<400> 42
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ttggatgtag cagctccaaa tagaggttac ctgattattg cttttataat tgaattctta 180

aagagtttac atcataatta tataattgta tttttgaaac atcacagaaa cccaacatgt 240

acctatttgt aatcatcaga gtatatacat ctgattagga ctcagctatg ttcaaggctt 300

catcgagccc aacatacaat tatcatttgc attttctgct acaatcaaag aaaacacatt 360

gtgtgctatt agtggccatt gcaagaagga agatgctgtt ttcaataaca ggaaatcaag 420

aacaaacaaa ataatcgtct tccatttaaa aaaaaaagaa agcctacaga aaagtgaaaa 480

ggacagggtc ctaaaaacat ctagtgatgc caataaaatg gaatgttttt taaaaagtga 540

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aaacagacgc ttttggtgca ctgagcgtta caaaaaggca gaaagctcac aaatagatgc 660

aattttaggt atgggaataa aatgacataa agaaactgac cttgttatca gtttagctgt 720

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tt 1142

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<211> 498
<212> DNA
<213> Homo sapien

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gtgccaattg atagttcttt tagcaattaa gaatatggta tttgggaaga aaagtttgaa 180

atgcaacaaa tggatatttc aacacagtag tattatatta tcagttcttt agtaagtgat 240

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aatgtttaca tcaatttata ttgaatgtca cataatttca tggaaggaaa ggtagcttga 360

tatttagatt ctaagatata atctgaaagg aaactaatta tgttctctac acttactgta 420

atactgatta ttcttacata tcaaattatt gaactttaaa aatttcattg tatagtcatt 480

aaactgagtt gggttttt 498

<210> 44
<211> 2254
<212> DNA
<213> Homo sapien

<400> 44
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cctgcctcag cctctgagtg gctgggattg caggcgtgag cactgcgccc ggcctatact 120

gtatatattt ttaaagactg ttctaataga tataaaaact gtaaaaaata agtatttttа 180

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tgattttcag taaccaccct ttagagtatt tgtttactaa gttcaccaca ttttgaacat 480

ggtagtttta gactgcaata atatttagac ttacattatt acttactgct aagtaaaatc 540

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<213> Homo sapien

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<213> Homo sapien

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<213> Homo sapien

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<213> Homo sapien

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<210> 58
<211> 2184
<212> DNA
<213> Homo sapien

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<211> 1441
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<213> Homo sapien

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<213> Homo sapien

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<211> 2145
<212> DNA
<213> Homo sapien

<400> 62

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<212> DNA
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agcaccacag agaccaaaga acccaagaag gcaaaaaggt catccaagga ggaagccgag 2400

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ccccaggaag cctagacggt gtcgccgcct gctccctgca cccatgacaa tcaccttcag 2520

aatcatgtcg atcctggggg ccctcagctc ctggggaccc cactccctgc tctaacacct 2580

gcctaggttt ttcctactgt cctcagaggc gtgctggtcc cctcctcagt gacatcaaag 2640

cctggcctaa ttgttcctat tggggatgag ggtggcatga ggaggtccca cttgcaactt 2700

ctttctgttg agagaacctc aggtacggag aagaatagag gtcctcatgg gtcccttgaa 2760

ggaagaggga ccagggtggg agagctgatt gcagaaagga gagacgtgca gcgcccctct 2820

gcacccttat catgggatgt caacagaatt ttttccctcc actccatccc tccctcccgt 2880

ccttcccctc ttcttctttc cttaccatca aaagatgta 2919

<210> 75
<211> 27
<212> PRT
<213> Homo sapien

<400> 75

Met His Thr Asn Leu Ser Tyr Met Cys Pro Phe Leu Leu Met Ile Phe
1   5   10   15

Thr Ser Leu Arg Thr Leu Thr Asn Ile Val Cys
            20   25

<210> 76
<211> 29
<212> PRT
<213> Homo sapien

<400> 76

Met Ile Lys Asn Asp Phe Gly Trp Leu Pro Phe Pro Ser Phe Pro Arg
1   5   10   15

Val Leu Ile Tyr Val Leu His Thr Cys Lys Leu Lys Cys
            20   25

<210> 77
<211> 38
<212> PRT
<213> Homo sapien

<400> 77

Met Ser Leu Ile Lys Lys Ile Ser Thr Thr Gly Leu Phe Cys Leu Gly
1   5   10   15

Phe Trp Lys His Asn Phe Pro Met His Lys Lys Ala Leu Ser Lys Leu
            20   25   30

Leu Ser Tyr Gly Tyr Asn
        35

<210> 78

<211> 170
<212> PRT
<213> Homo sapien

<400> 78

Ala Leu Glu Thr Ala Pro Thr Leu Ala Leu Pro Asp Ser Ser Gln Pro
1 5 10 15

Phe Ser Leu His Thr Ala Glu Val Gln Gly Cys Ala Val Gly Ile Leu
20 25 30

Thr Gln Gly Pro Gly Ser Arg Pro Val Ala Phe Leu Ser Lys His Leu
35 40 45

Asp Leu Thr Val Leu Gly Trp Ser Ser Cys Leu Arg Ala Ala Ala Ser
50 55 60

Ala Ala Leu Ile Leu Leu Glu Ala Leu Lys Ile Thr Asn Tyr Ala Gln
65 70 75 80

Leu Thr Leu Tyr Ser Ser His Asn Phe Gln Asn Leu Phe Ser Ser Ser
85 90 95

His Leu Met His Val Leu Ser Ala Pro Trp Leu Leu Gln Leu Tyr Ser
100 105 110

Leu Phe Val Glu Ser Pro Thr Ile Thr Ile Ile Pro Gly Arg Asp Phe
115 120 125

Asn Pro Ala Ser His Ile Ile Pro Asp Thr Thr Pro Asp Pro His Asp
130 135 140

Cys Ile Ser Leu Ile His Leu Thr Phe Thr Pro Phe Pro His Ile Ser
145 150 155 160

Phe Phe Pro Val Pro His Pro Asp His Thr
165 170

<210> 79
<211> 74
<212> PRT
<213> Homo sapien

<400> 79

Met Glu Ser Cys Ser His Arg Cys Leu Asp Leu Ser Leu Ser Leu Ser
1 5 10 15

Leu Ser Phe Leu Leu Ser Gln Gln Leu Phe His Arg Gly Ser His Phe
20 25 30

Glu Arg Leu Lys Tyr Cys Gly Phe Asn Lys Glu Leu Phe Phe Ser Leu
35 40 45

Ser Lys Ile Leu Ser Glu Arg Asn Lys Met Gly Lys Gly Arg Leu Arg
50 55 60

Asn Ala Tyr Cys Pro Lys Ser Asn Ser Tyr
65 70

<210> 80
<211> 32
<212> PRT
<213> Homo sapien

<400> 80

Met His Val Leu Leu Thr Arg Leu Leu Ile Leu Gln Glu Leu Leu Phe
1 5 10 15

Val Thr Leu Phe Leu Gly Val Met Met Val Leu Val Phe Met Phe Lys
20 25 30

<210> 81
<211> 27
<212> PRT
<213> Homo sapien

<400> 81

Met Leu Ser Leu Ile Thr Ala Ser Pro Asp Leu Thr His Ser Ala Arg
1 5 10 15

Ala Glu Gly Lys Pro Arg Met Leu Pro Asp Tyr
20 25

<210> 82
<211> 25
<212> PRT
<213> Homo sapien

<400> 82

Met Ser His Tyr His Val Ile Ile Cys Ile Asn Ile Ser His Asn Asp
1 5 10 15

```
Phe His Asn Phe Gln Arg Leu Ile Ser
            20                  25


<210>  83
<211>  52
<212>  PRT
<213>  Homo sapien

<400>  83

Met Asp Cys Pro His Ala Ala Pro Thr Ala Cys Cys Gly Met Cys Ser
1               5                   10                  15


Ser Ser Ser Arg Gly Phe Ser Tyr Ile Leu Thr Leu Leu Asn Thr Val
            20                  25                  30


Met Gly Leu Pro Thr Glu Pro Ser Gln Gly Gly Ala Gln Pro Pro Val
        35                  40                  45


Gly Arg Leu Ala
    50


<210>  84
<211>  175
<212>  PRT
<213>  Homo sapien

<400>  84

Val Leu His Leu Tyr Arg Ser Gly Gln Tyr Leu Gln Asn Ser Thr Ala
1               5                   10                  15


Ser Ser Ser Thr Glu Tyr Gln Cys Ile Pro Asp Ser Thr Ile Pro Gln
            20                  25                  30


Glu Asp Tyr Arg Cys Trp Pro Ser Tyr His His Gly Ser Cys Leu Leu
        35                  40                  45


Ser Val Phe Asn Leu Ala Glu Ala Val Asp Val Cys Glu Ser His Ala
    50                  55                  60


Gln Cys Arg Ala Phe Val Val Thr Asn Gln Thr Thr Trp Thr Gly Glu
65                  70                  75                  80


Pro Val Gly Glu Ala Leu Pro Arg Glu Met Ala Gly Pro Leu Trp Arg
                85                  90                  95


Leu Ile Asp Ser Asp Pro Pro Ser Glu Val Arg Gly Gly Ala Glu Val
```

100 105 110

Met Arg Glu Arg Tyr Thr Cys Leu Gln Gly Ser Gln Ile Arg Glu Asn
115 120 125

Gly Leu Ala Ser Arg Lys Arg Asn Ile Gln Pro Cys Tyr Leu Ser Pro
130 135 140

Leu Pro Pro Gly Arg Gln Leu Val Phe Phe Lys Thr Gly Trp Ser Gln
145 150 155 160

Val Val Pro Asp Pro Asn Lys Thr Thr Tyr Val Lys Ala Ser Gly
165 170 175

<210> 85
<211> 51
<212> PRT
<213> Homo sapien

<400> 85

Met Ser Pro Leu Arg Thr Pro Leu Leu Arg Gly Leu Gln Glu Leu Gly
1 5 10 15

Glu Glu Trp Lys Ser Ala Lys Arg Ile Thr Ser Phe Ser Lys Ser Met
20 25 30

Gly Thr Thr Arg Ala Arg Gly Cys Glu Pro Gly Gly Trp Leu Pro Phe
35 40 45

Thr Gly Leu
50

<210> 86
<211> 48
<212> PRT
<213> Homo sapien

<400> 86

Met Val Pro Ile Gly Cys Lys Leu Ser Glu Ser Phe His Phe Asp Asn
1 5 10 15

Leu Ser Tyr His Asp Leu Ile Val Cys Leu Gln Ile Gln Asp Leu Lys
20 25 30

Ser Phe Leu Ser Gln Ala Trp Lys Glu Leu Leu Tyr Tyr Gln Tyr Cys
35 40 45

<210> 87
<211> 40
<212> PRT
<213> Homo sapien

<400> 87

Met Leu Phe Pro Val Ala Val Tyr Ser Tyr Asn Ile Asn Ile Ile Val
1 5 10 15

Pro Trp Leu Thr Asp Lys Asn Glu Ser Ile Lys Cys Pro Val Ser Glu
20 25 30

Thr Gln Val Phe Phe Leu His Pro
35 40

<210> 88
<211> 34
<212> PRT
<213> Homo sapien

<400> 88

Met Ser Trp Ser Leu Pro Ser Leu Lys Asn Leu Ser Cys His Ile Ile
1 5 10 15

His Val Leu Asn Lys Phe Val Cys Ile Phe Leu Leu Ile Cys Leu Ile
20 25 30

Ser Ile

<210> 89
<211> 32
<212> PRT
<213> Homo sapien

<400> 89

Met Cys Val Cys Glu Lys Glu Phe Leu Asn Val Phe Tyr Leu Leu Arg
1 5 10 15

Gly Pro Ser Pro Thr Leu Gly Leu Ser Val Ile Ser Asn His Ile Thr
20 25 30

<210> 90
<211> 28
<212> PRT
<213> Homo sapien

<400> 90

Met Lys Pro Gln Cys Cys Lys Phe Thr Val Phe Ala Cys Ser Arg Cys
1 5 10 15

Phe Val Leu Lys Glu Thr Phe Thr Ile Tyr Leu Leu
20 25

<210> 91
<211> 111
<212> PRT
<213> Homo sapien

<400> 91

Lys Asp Arg Lys Ser Gly Arg Thr Ala Leu His Leu Ala Ala Glu Glu
1 5 10 15

Ala Asn Leu Glu Leu Ile Arg Leu Phe Leu Glu Arg Pro Ser Cys Leu
20 25 30

Ser Phe Val Asn Ala Lys Ala Tyr Asn Gly Asn Thr Ala Leu His Val
35 40 45

Ala Ala Ser Leu Gln Tyr Arg Leu Thr Gln Leu Asp Ala Val Arg Leu
50 55 60

Leu Met Arg Lys Gly Ala Asp Pro Ser Thr Arg Asn Leu Glu Asn Glu
65 70 75 80

Gln Pro Val His Leu Val Pro Asp Gly Pro Val Gly Glu Gln Ile Arg
85 90 95

Arg Ile Leu Lys Gly Lys Ser Ile Gln Gln Arg Ala Pro Pro Tyr
100 105 110

<210> 92
<211> 33
<212> PRT
<213> Homo sapien

<400> 92

Met Gly Ile Ser Trp Ser Ala Phe Gly Pro Arg Ile Arg Ile Asp Gly
1 5 10 15

Ser Pro Pro Pro Cys Leu Leu Pro Thr Pro Pro Leu Leu Pro Leu Cys
20 25 30

Leu

<210> 93
<211> 109
<212> PRT
<213> Homo sapien

<400> 93

```
Arg Asp Glu Ser Pro Glu Pro Gln Arg Pro Ser Trp Ala Arg Ser Arg
1               5                  10                  15

His Cys Glu Ala Cys Val Glu Glu Ser Ser Lys Leu Asp Phe Ser Glu
            20                  25                  30

Phe Gly Ala Lys Arg Lys Phe Thr Gln Ser Phe Met Arg Ser Glu Glu
        35                  40                  45

Glu Gly Glu Lys Glu Arg Thr Glu Asn Arg Glu Glu Gly Arg Phe Ala
    50                  55                  60

Ser Gly Arg Arg Ser Gln Tyr Arg Arg Ser Thr Asp Arg Glu Glu Glu
65                  70                  75                  80

Glu Glu Met Asp Asp Glu Ala Ile Ile Ala Ala Trp Arg Arg Arg Gln
                85                  90                  95

Glu Glu Thr Arg Thr Lys Leu Gln Lys Arg Arg Glu Asp
            100                 105
```

<210> 94
<211> 44
<212> PRT
<213> Homo sapien

<400> 94

```
Met Asn Val Asp Thr Phe Leu Glu Asn Ile Tyr Gln Cys Glu Asn Phe
1               5                  10                  15

Phe Asn Thr Leu Thr Thr Lys Ile Lys Tyr Ser Leu Ile Ser Leu Phe
            20                  25                  30

Asn Lys His Gln Asn Asn Val Ser Val Phe Ile Leu
        35                  40
```

<210> 95
<211> 34
<212> PRT
<213> Homo sapien

<400> 95

Met Tyr Cys Ile His Phe Tyr Thr Thr Ser Ala Phe Thr Val Thr Asn
1 5 10 15

Ile Glu Asn Ile Leu Pro Ser Ile Glu Leu His Met Leu Leu Leu Ser
20 25 30

Val Cys

<210> 96
<211> 51
<212> PRT
<213> Homo sapien

<400> 96

Met His Phe His Gly Ile Val Phe Leu Ser Ser Phe Asn Phe Cys Tyr
1 5 10 15

Leu Thr Ser Leu Ile Ala Gln Gln Thr Ser Phe Gln Lys Phe Ser Val
20 25 30

Lys Ala Phe Glu Leu Leu Ile Phe Asp Leu Ile Tyr Ser Gln His Phe
35 40 45

Ala Thr Phe
50

<210> 97
<211> 77
<212> PRT
<213> Homo sapien

<400> 97

Asp Ile Tyr Ile Tyr Phe Ala Asp Gly Val Ser Leu Ser Pro Arg Leu
1 5 10 15

Glu Cys Ser Gly Thr Ile Ser Ala His Cys Asp Leu His Leu Leu Gly
20 25 30

Ser Ser Asp Ser Pro Ala Ser Thr Ser Arg Val Val Gly Thr Thr Gly

35 40 45

Val Cys His His Ala Trp Thr Val Leu Gly Phe Phe Val Phe Leu Val
50 55 60

Glu Ile Gly Phe Cys His Leu Asp Gln Ala Asn Leu Glu
65 70 75

<210> 98
<211> 36
<212> PRT
<213> Homo sapien

<400> 98

Met Ser Val Trp Ser Cys Tyr Gln Pro Val Leu Leu Asn Val Leu Gly
1 5 10 15

Gln Leu Glu Thr Ile Ile Lys Glu Thr Asp Pro Gly Asp His Gln Ser
20 25 30

Ser Phe Arg Leu
35

<210> 99
<211> 28
<212> PRT
<213> Homo sapien

<400> 99

Met Asp Phe Val Lys His Gln Leu Val Asn Ile Phe Lys Phe Ile Ser
1 5 10 15

Cys Met Ala Leu Val Ser Val Pro Cys Ser Lys Cys
20 25

<210> 100
<211> 57
<212> PRT
<213> Homo sapien

<400> 100

Met Trp Gly Phe Ile Ala Lys Asn Gly Lys Ile Phe Gly Leu Ile Phe
1 5 10 15

Cys Lys Phe Ser Leu Cys Leu Gly Asn Ser His Arg Met Trp Arg Asn
20 25 30

Glu Leu Leu Gly Ser Val Ala Ala Asp Ser Cys Pro Gly Glu Leu Arg
35 40 45

Ser Gln Asp Arg Gln Arg Lys Thr Val
50 55

<210> 101
<211> 61
<212> PRT
<213> Homo sapien

<400> 101

Met Phe Lys Ala Ser Ser Ser Pro Thr Tyr Asn Tyr His Leu His Phe
1 5 10 15

Leu Leu Gln Ser Lys Lys Thr Pro Cys Val Leu Leu Val Ala Leu Ala
20 25 30

Arg Arg Lys Met Leu Phe Ser Ile Thr Gly Asn Gln Arg Thr Asn Lys
35 40 45

Asp Asn Pro Ser Leu His Leu Thr Lys Thr Lys Lys Ala
50 55 60

<210> 102
<211> 41
<212> PRT
<213> Homo sapien

<400> 102

Met Met Thr Pro Ser Leu Phe Lys Phe Leu Tyr Phe Tyr Leu Leu Ser
1 5 10 15

Arg Asn Tyr Phe Val Gln Cys Glu Asn Val Leu Thr His Gly Arg Arg
20 25 30

Val Pro Ile Asp Ser Ser Phe Ser Asn
35 40

<210> 103
<211> 44
<212> PRT
<213> Homo sapien

<400> 103

Met Cys Tyr Leu Leu Leu Leu Leu Ile Gln Thr Ala Glu Leu Leu Ile

```
1               5                   10                  15

His Pro Gln Gly Leu Gln Ala Val Ser Asn Gly Glu Ser Ala Leu Lys
            20                  25                  30

Gly Thr Arg Pro Thr Phe Ser Ser Pro Phe Ile Leu
        35                  40
```

<210> 104
<211> 48
<212> PRT
<213> Homo sapien

<400> 104

```
Met Arg Ser Ile Phe Leu Leu Leu Lys Phe Ile Leu Asn Ala Asn Val
1               5                   10                  15

Phe Cys Arg Cys Phe Ile Trp Glu Ile Leu Leu Cys Leu Lys Thr Tyr
            20                  25                  30

Glu Ile Asn Leu Ser Cys Gly Leu Pro Thr Ser Lys Pro Leu Leu Thr
        35                  40                  45
```

<210> 105
<211> 109
<212> PRT
<213> Homo sapien

<400> 105

```
Phe Phe Phe Ser Leu Arg Gln Ser Leu Leu Leu Leu Pro Arg Leu Glu
1               5                   10                  15

Phe Asn Gly Thr Ile Leu Ala Tyr His Asn Leu Cys Leu Leu Gly Ser
            20                  25                  30

Ser Asn Ser Pro Ala Ser Gly Ser Gln Val Ala Gly Ile Thr Gly Met
        35                  40                  45

Cys His His Thr Arg Leu Ile Phe Val Phe Leu Val Glu Thr Gly Tyr
    50                  55                  60

Leu His Val Gly Gln Ala Gly Leu Glu Leu Leu Thr Ser Gly Asp Pro
65                  70                  75                  80

Pro Thr Ser Ala Ser Gln Ser Ala Gly Ile Thr Gly Val Ser Arg His
                85                  90                  95
```

Ala Trp Pro Ser Ser Ala Phe Ile His Ile Phe Ser Pro
100 105

<210> 106
<211> 46
<212> PRT
<213> Homo sapien

<400> 106

Met Val Val Asp Gln Ala Asn Pro Leu Glu Val Ile Ser Ser Phe Asn
1 5 10 15

Lys Phe Cys Thr Leu Pro Trp Ala Gly Arg Ser Glu Ala Glu Phe His
20 25 30

His Thr Ala Ala Ile Val Trp Ser Asp Ser Val Gln Leu Gly
35 40 45

<210> 107
<211> 24
<212> PRT
<213> Homo sapien

<400> 107

Met Arg Trp Ser Gly Gly Pro Glu Asn Thr Gly Asn Ile Lys Ser Leu
1 5 10 15

Ser Gln Gly Asn Leu Met Phe Ser
20

<210> 108
<211> 697
<212> PRT
<213> Homo sapien

<400> 108

Met Cys Lys Ser Leu Arg Tyr Cys Phe Ser His Cys Leu Tyr Leu Ala
1 5 10 15

Met Thr Arg Leu Glu Glu Val Asn Arg Glu Val Asn Met His Ser Ser
20 25 30

Val Arg Tyr Leu Gly Tyr Leu Ala Arg Ile Asn Leu Leu Val Ala Ile
35 40 45

Cys Leu Gly Leu Tyr Val Arg Trp Glu Lys Thr Ala Asn Ser Leu Ile
50 55 60

Leu Val Ile Phe Ile Leu Gly Leu Phe Val Leu Gly Ile Ala Ser Ile
65 70 75 80

Leu Tyr Tyr Tyr Phe Ser Met Glu Ala Ala Ser Leu Ser Leu Ser Asn
85 90 95

Leu Trp Phe Gly Phe Leu Leu Gly Leu Leu Cys Phe Leu Asp Asn Ser
100 105 110

Ser Phe Lys Asn Asp Val Lys Glu Glu Ser Thr Lys Tyr Leu Leu Leu
115 120 125

Thr Ser Ile Val Leu Arg Ile Leu Cys Ser Leu Val Glu Arg Ile Ser
130 135 140

Gly Tyr Val Arg His Arg Pro Thr Leu Leu Thr Thr Val Glu Phe Leu
145 150 155 160

Glu Leu Val Gly Phe Ala Ile Ala Ser Thr Thr Met Leu Val Glu Lys
165 170 175

Ser Leu Ser Val Ile Leu Leu Val Val Ala Leu Ala Met Leu Ile Ile
180 185 190

Asp Leu Arg Met Lys Ser Phe Leu Ala Ile Pro Asn Leu Val Ile Phe
195 200 205

Ala Val Leu Leu Phe Phe Ser Ser Leu Glu Thr Pro Lys Asn Pro Ile
210 215 220

Ala Phe Ala Cys Phe Phe Ile Cys Leu Ile Thr Asp Pro Phe Leu Asp
225 230 235 240

Ile Tyr Phe Ser Gly Leu Ser Val Thr Glu Arg Trp Lys Pro Phe Leu
245 250 255

Tyr Arg Gly Arg Ile Cys Arg Arg Leu Ser Val Val Phe Ala Gly Met
260 265 270

Ile Glu Leu Thr Phe Phe Ile Leu Ser Ala Phe Lys Leu Arg Asp Thr
275 280 285

```
His Leu Trp Tyr Phe Val Ile Pro Gly Phe Ser Ile Phe Gly Ile Phe
    290                 295                 300

Trp Met Ile Cys His Ile Ile Phe Leu Leu Thr Leu Trp Gly Phe His
305                 310                 315                 320

Thr Lys Leu Asn Asp Cys His Lys Val Tyr Phe Thr His Arg Thr Asp
                325                 330                 335

Tyr Asn Ser Leu Asp Arg Ile Met Ala Ser Lys Gly Met Arg His Phe
            340                 345                 350

Cys Leu Ile Ser Glu Gln Leu Val Phe Phe Ser Leu Leu Ala Thr Ala
        355                 360                 365

Ile Leu Gly Ala Val Ser Trp Gln Pro Thr Asn Gly Ile Phe Leu Ser
    370                 375                 380

Met Phe Leu Ile Val Leu Pro Leu Glu Ser Met Ala His Gly Leu Phe
385                 390                 395                 400

His Glu Leu Gly Asn Cys Leu Gly Gly Thr Ser Val Gly Tyr Ala Ile
                405                 410                 415

Val Ile Pro Thr Asn Phe Cys Ser Pro Asp Gly Gln Pro Thr Leu Leu
            420                 425                 430

Pro Pro Glu His Val Gln Glu Leu Asn Leu Arg Ser Thr Gly Met Leu
        435                 440                 445

Asn Ala Ile Gln Arg Phe Phe Ala Tyr His Met Ile Glu Thr Tyr Gly
    450                 455                 460

Cys Asp Tyr Ser Thr Ser Gly Leu Ser Phe Asp Thr Leu His Ser Lys
465                 470                 475                 480

Leu Lys Ala Phe Leu Glu Leu Arg Thr Val Asp Gly Pro Arg His Asp
                485                 490                 495

Thr Tyr Ile Leu Tyr Tyr Ser Gly His Thr His Gly Thr Gly Glu Trp
            500                 505                 510

Ala Leu Ala Gly Gly Asp Thr Leu Arg Leu Asp Thr Leu Ile Glu Trp
        515                 520                 525
```

Trp Arg Glu Lys Asn Gly Ser Phe Cys Ser Arg Leu Ile Ile Val Leu
530 535 540

Asp Ser Glu Asn Ser Thr Pro Trp Val Lys Glu Val Arg Lys Ile Asn
545 550 555 560

Asp Gln Tyr Ile Ala Val Gln Gly Ala Glu Leu Ile Lys Thr Val Asp
565 570 575

Ile Glu Glu Ala Asp Pro Pro Gln Leu Gly Asp Phe Thr Lys Asp Trp
580 585 590

Val Glu Tyr Asn Cys Asn Ser Ser Asn Asn Ile Cys Trp Thr Glu Lys
595 600 605

Gly Arg Thr Val Lys Ala Val Tyr Gly Val Ser Lys Arg Trp Ser Asp
610 615 620

Tyr Thr Leu His Leu Pro Thr Gly Ser Asp Val Ala Lys His Trp Met
625 630 635 640

Leu His Phe Pro Arg Ile Thr Tyr Pro Leu Val His Leu Ala Asn Trp
645 650 655

Leu Cys Gly Leu Asn Leu Phe Trp Ile Cys Lys Thr Cys Phe Arg Cys
660 665 670

Leu Lys Arg Leu Lys Met Ser Trp Phe Leu Pro Thr Val Leu Asp Thr
675 680 685

Gly Gln Gly Phe Lys Leu Val Lys Ser
690 695

<210> 109
<211> 36
<212> PRT
<213> Homo sapien

<400> 109

Met Thr Gly Lys Tyr Met Glu Ala Glu Thr Ser Thr Lys His Tyr Pro
1 5 10 15

Ser Arg Asn Asn Leu Ser Val Lys Lys Gln Leu Ser Lys Pro Ala Leu
20 25 30

```
Ile Ser Leu Arg
        35


<210>  110
<211>  21
<212>  PRT
<213>  Homo sapien

<400>  110

Met Tyr Val Phe Asn Asp Val Thr Ser Asn Gln Ala Asn Ile Asn Ile
1               5                   10                  15


Ile Glu Thr Leu Ile
            20


<210>  111
<211>  130
<212>  PRT
<213>  Homo sapien

<400>  111

Met Pro Thr Gly Pro Gln Ser Ala Ser Phe Gly Ile Thr Gly Asp Asp
1               5                   10                  15


Gly Ser Pro Val Met Ala Lys Pro Pro Ser Ile Pro Pro Phe Leu Ile
            20                  25                  30


Thr His Leu Leu Trp Lys Ile Cys His Leu Gly Phe Asn Trp Ile Arg
        35                  40                  45


Arg Glu Thr Val Gly Thr Gln Glu Gln Asn Gly Ala Arg Arg Tyr Val
    50                  55                  60


Leu Leu Pro Met Gln His Val Lys Lys Cys Pro Thr Cys Pro His Leu
65                  70                  75                  80


Lys Ile Arg Pro Leu Thr Ser Gln Lys Ile Arg Tyr Ser Gly Pro Gly
                85                  90                  95


Ala Val Ala His Ala Cys Asn Arg Asn Thr Ser Gly Gly Arg Gly Gly
            100                 105                 110


Arg Ile Ile Arg Ser Arg Val Arg Asp Gln Pro Gly Lys Asp Gln Pro
        115                 120                 125
```

Gly Lys
130

<210> 112
<211> 31
<212> PRT
<213> Homo sapien

<400> 112

Met Leu Val Met Val Phe Phe Phe Phe Phe Phe Phe Leu Val Ile Leu
1 5 10 15

Met Leu Trp Lys Arg Ser His Gly Phe Ile Ser Lys Gly Gly Asn
20 25 30

<210> 113
<211> 107
<212> PRT
<213> Homo sapien

<400> 113

Pro Leu Pro Pro Leu Leu Ser Ile Phe Ile Leu Thr Gly His Lys Gln
1 5 10 15

Gly Ala Arg Gly Leu His Phe Gly Arg Pro Arg Trp Ala Asp His Leu
20 25 30

Arg Pro Gly Val Ala His Gln Pro Gly Gln Cys Gly Glu Thr Val Ser
35 40 45

Thr Lys Asn Thr Lys Ile Ser Trp Ala Trp Trp Cys Thr Pro Ala Ile
50 55 60

Pro Ala Thr Arg Arg Val Lys Gln Glu Asn Arg Leu Asn Pro Gly Gly
65 70 75 80

Arg Gly Phe Ser Glu Pro Arg Ser His His Arg Thr Pro Thr Trp Gly
85 90 95

Thr Glu Arg Asp Ser Val Pro Lys Arg Ala Lys
100 105

<210> 114
<211> 58
<212> PRT
<213> Homo sapien

<400> 114

Met Leu Leu Met Asp Thr Arg Lys Glu Leu Leu His Ala Leu Glu Met
1 5 10 15

Glu Pro Leu Leu Ser Leu Gln Ala Phe Val Val Leu Pro Phe Lys Ser
20 25 30

Ala Ile His Gly Pro Gln Gln Glu Asn Asn Leu Val Phe Ser Leu Leu
35 40 45

Ile Val Leu Asp Lys Tyr Val His Met Asp
50 55

<210> 115
<211> 46
<212> PRT
<213> Homo sapien

<400> 115

Met Ser Asp Ser His Gln Gly Ser Gly Thr Val Pro Phe Leu Gly Ser
1 5 10 15

Pro Thr Lys Ser Asn Ser Leu Asp Pro Glu Lys Trp Ser Ala Trp Asp
20 25 30

Ala Leu Lys Arg Trp Gly Cys Pro Cys Val Ala Ala Ser Asn
35 40 45

<210> 116
<211> 45
<212> PRT
<213> Homo sapien

<400> 116

Met His Pro Asp Leu Asn Glu Gln Ala Glu Arg Lys Val Thr Lys Lys
1 5 10 15

Asp Ser Thr Pro Gly Glu Ser Glu Pro Cys Gly Pro Lys Val Phe Ile
20 25 30

Arg Lys Thr Val Leu Gly His Leu Asp Thr Tyr Pro Arg
35 40 45

<210> 117
<211> 45

<212> PRT
<213> Homo sapien

<400> 117

Met Trp Lys Leu Phe Tyr Leu Ala Ser Glu Glu Ser Val Ala Asn Leu
1 5 10 15

Leu His Arg Leu Glu Asp Ser Leu Val Val Phe Phe Pro Ser Val Ile
20 25 30

Asp His Ser Ile Arg Asn Pro Tyr Ile Phe Arg Pro His
35 40 45

<210> 118
<211> 60
<212> PRT
<213> Homo sapien

<400> 118

Gln Pro Gly Val Lys Ile Arg Ala Ala Leu Lys Glu Thr Lys Thr Gln
1 5 10 15

Lys Pro Leu Gln Lys Ile Ser Glu Phe Arg Ser Trp Phe Phe Glu Lys
20 25 30

Ile Asn Lys Ile Asp Arg Pro Pro Ala Arg Leu Ile Lys Lys Lys Arg
35 40 45

Glu Lys Asn Gln Lys Glu Lys Lys Lys Lys Lys Lys
50 55 60

<210> 119
<211> 32
<212> PRT
<213> Homo sapien

<400> 119

Met Cys Pro Ala Cys Ser Arg Leu Pro Thr His Asp Leu Leu Ala Trp
1 5 10 15

Pro Pro Lys Val Leu Gly Phe Thr Gly Val Thr Thr Ala Pro Gly Gln
20 25 30

<210> 120
<211> 41
<212> PRT
<213> Homo sapien

<400> 120

Met Pro Tyr Cys Ile Leu His Thr Ala Leu Phe Ser Arg Gly Ser Gly
1 5 10 15

Ser Lys Leu His Ser Ser His Tyr Leu Cys Ser Leu Lys Ile Lys Val
20 25 30

Phe Gln Gln His Ser Leu Leu Ser Ser
35 40

<210> 121
<211> 105
<212> PRT
<213> Homo sapien

<400> 121

Met Gln Gly Lys Cys Thr Pro Thr Ile Phe Phe Phe Ile Ala Ser Phe
1 5 10 15

Ile Phe Asp Thr Glu Ser Ser Ser Val Ala Gln Ala Gly Val Gln Trp
20 25 30

Arg Asp Leu Gly Ser Leu Gln Pro Leu Pro Pro Gly Phe Thr Pro Phe
35 40 45

Ser Cys Leu Ser Leu Pro Ser Ser Trp Asp Tyr Arg Arg Pro Pro Pro
50 55 60

Arg Pro Ala Asn Phe Phe Cys Ile Phe Ser Arg Asp Gly Val Ser Pro
65 70 75 80

Cys Ala Pro Gly Trp Ser Arg Ser Pro Asn Leu Met Ile Arg Pro Pro
85 90 95

Arg Pro Pro Lys Val Leu Gly Leu Gln
100 105

<210> 122
<211> 38
<212> PRT
<213> Homo sapien

<400> 122

Met Gly Gln Arg Glu Leu Phe Phe Tyr Ile Ala His Cys Ser Leu Thr
1 5 10 15

Ala Ile Arg Lys Ile Ser Cys Ser Trp Phe Ile Leu Asn Leu Gln Thr
20 25 30

Thr Asp Met Ile Phe Gln
35

<210> 123
<211> 15
<212> PRT
<213> Homo sapien

<400> 123

Met Gln Glu Tyr Lys His Cys His Met Asn Asn Leu Ser Leu Tyr
1 5 10 15

<210> 124
<211> 764
<212> PRT
<213> Homo sapien

<400> 124

Met Leu Leu Phe Val Leu Thr Cys Leu Leu Ala Val Phe Pro Ala Ile
1 5 10 15

Ser Thr Lys Ser Pro Ile Phe Gly Pro Glu Glu Val Asn Ser Val Glu
20 25 30

Gly Asn Ser Val Ser Ile Thr Cys Tyr Tyr Pro Pro Thr Ser Val Asn
35 40 45

Arg His Thr Arg Lys Tyr Trp Cys Arg Gln Gly Ala Arg Gly Gly Cys
50 55 60

Ile Thr Leu Ile Ser Ser Glu Gly Tyr Val Ser Ser Lys Tyr Ala Gly
65 70 75 80

Arg Ala Asn Leu Thr Asn Phe Pro Glu Asn Gly Thr Phe Val Val Asn
85 90 95

Ile Ala Gln Leu Ser Gln Asp Asp Ser Gly Arg Tyr Lys Cys Gly Leu
100 105 110

Gly Ile Asn Ser Arg Gly Leu Ser Phe Asp Val Ser Leu Glu Val Ser
115 120 125

Gln Gly Pro Gly Leu Leu Asn Asp Thr Lys Val Tyr Thr Val Asp Leu
130 135 140

Gly Arg Thr Val Thr Ile Asn Cys Pro Phe Lys Thr Glu Asn Ala Gln
145 150 155 160

Lys Arg Lys Ser Leu Tyr Lys Gln Ile Gly Leu Tyr Pro Val Leu Val
165 170 175

Ile Asp Ser Ser Gly Tyr Val Asn Pro Asn Tyr Thr Gly Arg Ile Arg
180 185 190

Leu Asp Ile Gln Gly Thr Gly Gln Leu Leu Phe Ser Val Val Ile Asn
195 200 205

Gln Leu Arg Leu Ser Asp Ala Gly Gln Tyr Leu Cys Gln Ala Gly Asp
210 215 220

Asp Ser Asn Ser Asn Lys Lys Asn Ala Asp Leu Gln Val Leu Lys Pro
225 230 235 240

Glu Pro Glu Leu Val Tyr Glu Asp Leu Arg Gly Ser Val Thr Phe His
245 250 255

Cys Ala Leu Gly Pro Glu Val Ala Asn Val Ala Lys Phe Leu Cys Arg
260 265 270

Gln Ser Ser Gly Glu Asn Cys Asp Val Val Val Asn Thr Leu Gly Lys
275 280 285

Arg Ala Pro Ala Phe Glu Gly Arg Ile Leu Leu Asn Pro Gln Asp Lys
290 295 300

Asp Gly Ser Phe Ser Val Val Ile Thr Gly Leu Arg Lys Glu Asp Ala
305 310 315 320

Gly Arg Tyr Leu Cys Gly Ala His Ser Asp Gly Gln Leu Gln Glu Gly
325 330 335

Ser Pro Ile Gln Ala Trp Gln Leu Phe Val Asn Glu Glu Ser Thr Ile
340 345 350

Pro Arg Ser Pro Thr Val Val Lys Gly Val Ala Gly Ser Ser Val Ala
355 360 365

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Val Leu Cys Pro Tyr Asn Arg Lys Glu Ser Lys Ser Ile Lys Tyr Trp
    370                 375                 380

Cys Leu Trp Glu Gly Ala Gln Asn Gly Arg Cys Pro Leu Leu Val Asp
385                 390                 395                 400

Ser Glu Gly Trp Val Lys Ala Gln Tyr Glu Gly Arg Leu Ser Leu Leu
                405                 410                 415

Glu Glu Pro Gly Asn Gly Thr Phe Thr Val Ile Leu Asn Gln Leu Thr
            420                 425                 430

Ser Arg Asp Ala Gly Phe Tyr Trp Cys Leu Thr Asn Gly Asp Thr Leu
        435                 440                 445

Trp Arg Thr Thr Val Glu Ile Lys Ile Ile Glu Gly Glu Pro Asn Leu
    450                 455                 460

Lys Val Pro Gly Asn Val Thr Ala Val Leu Gly Glu Thr Leu Lys Val
465                 470                 475                 480

Pro Cys His Phe Pro Cys Lys Phe Ser Ser Tyr Glu Lys Tyr Trp Cys
                485                 490                 495

Lys Trp Asn Asn Thr Gly Cys Gln Ala Leu Pro Ser Gln Asp Glu Gly
            500                 505                 510

Pro Ser Lys Ala Phe Val Asn Cys Asp Glu Asn Ser Arg Leu Val Ser
        515                 520                 525

Leu Thr Leu Asn Leu Val Thr Arg Ala Asp Glu Gly Trp Tyr Trp Cys
    530                 535                 540

Gly Val Lys Gln Gly His Phe Tyr Gly Glu Thr Ala Ala Val Tyr Val
545                 550                 555                 560

Ala Val Glu Glu Arg Lys Ala Ala Gly Ser Arg Asp Val Ser Leu Ala
                565                 570                 575

Lys Ala Asp Ala Ala Pro Asp Glu Lys Val Leu Asp Ser Gly Phe Arg
            580                 585                 590

Glu Ile Glu Asn Lys Ala Ile Gln Asp Pro Arg Leu Phe Ala Glu Glu
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595 600 605

Lys Ala Val Ala Asp Thr Arg Asp Gln Ala Asp Gly Ser Arg Ala Ser
610 615 620

Val Asp Ser Gly Ser Ser Glu Glu Gln Gly Gly Ser Ser Arg Ala Leu
625 630 635 640

Val Ser Thr Leu Val Pro Leu Gly Leu Val Leu Ala Val Gly Ala Val
645 650 655

Ala Val Gly Val Ala Arg Ala Arg His Arg Lys Asn Val Asp Arg Val
660 665 670

Ser Ile Arg Ser Tyr Arg Thr Asp Ile Ser Met Ser Asp Phe Glu Asn
675 680 685

Ser Arg Glu Phe Gly Ala Asn Asp Asn Met Gly Ala Ser Ser Ile Thr
690 695 700

Gln Glu Thr Ser Leu Gly Gly Lys Glu Glu Phe Val Ala Thr Thr Glu
705 710 715 720

Ser Thr Thr Glu Thr Lys Glu Pro Lys Lys Ala Lys Arg Ser Ser Lys
725 730 735

Glu Glu Ala Glu Met Ala Tyr Lys Asp Phe Leu Leu Gln Ser Ser Thr
740 745 750

Val Ala Ala Glu Ala Gln Asp Gly Pro Gln Glu Ala
755 760